

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003859 A2

(51) International Patent Classification⁷: **G03F 7/00**

(21) International Application Number:
PCT/JP2004/009980

(22) International Filing Date: 6 July 2004 (06.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-193831 8 July 2003 (08.07.2003) JP
60/489,493 24 July 2003 (24.07.2003) US

(71) Applicant (for all designated States except US): **SHOWA DENKO K.K.** [JP/JP]; 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 1058518 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ISHIGAKI, Satoru** [JP/JP]; C/o Corporate R & D Center (kawasaki), Showa Denko K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100867 (JP). **MATSUKI, Kunio** [JP/JP]; C/o Corporate R & D Center (kawasaki), Showa Denko K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100867 (JP).

(74) Agents: **AOKI, Atsushi et al.**; Ishida & Associates, Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome, Minato-ku, Tokyo 1058423 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RESIST COMPOSITION

(57) Abstract: There is provided a resist composition used for the production of printed boards, which comprises (A) a resin component, (B) a photopolymerization initiator, (C) water and (D) an organic solvent, wherein the organic solvent (D) contains: (D-1) at least one organic solvent selected from the group consisting of an (-hydroxycarboxylate ester, a (-alkoxycarboxylate ester, a 1,3-diol compound and a 1,3-diol compound derivative, and (D-2) an organic solvent having a hydroxyl group other than (D-1).



WO 2005/003859 A2

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003859 A3

- (51) International Patent Classification⁷: **G03F 7/004**
- (21) International Application Number:
PCT/JP2004/009980
- (22) International Filing Date: 6 July 2004 (06.07.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2003-193831 8 July 2003 (08.07.2003) JP
60/489,493 24 July 2003 (24.07.2003) US
- (71) Applicant (for all designated States except US): **SHOWA DENKO K.K.** [JP/JP]; 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 1058518 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ISHIGAKI, Satoru** [JP/JP]; C/o Corporate R & D Center (kawasaki), Showa Denko K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100867 (JP). **MATSUKI, Kunio** [JP/JP]; C/o Corporate R & D Center (kawasaki), Showa Denko K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100867 (JP).
- (74) Agents: **AOKI, Atsushi et al.**; Ishida & Associates, Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome, Minato-ku, Tokyo 1058423 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:
14 April 2005
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RESIST COMPOSITION

(57) Abstract: There is provided a resist composition used for the production of printed boards, which comprises (A) a resin component, (B) a photopolymerization initiator, (C) water and (D) an organic solvent, wherein the organic solvent (D) contains: (D-1) at least one organic solvent selected from the group consisting of an (-hydroxycarboxylate ester, a (-alkoxycarboxylate ester, a 1,3-diol compound and a 1,3-diol compound derivative, and (D-2) an organic solvent having a hydroxyl group other than (D-1).

WO 2005/003859 A3